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August 31, 2004

WRITER'S DIRECT NUMBER: (202) 772-8675 INTERNET ADDRESS: JHELVEY@SKGF.COM

Mail Stop Amendment

Commissioner for Patents PO Box 1450 Alexandria, VA 22313-1450

Re:

U.S. Utility Patent Application

Application No. 10/809,838; Filed: March 26, 2004

Large Gain Range, High Linearity, Low Noise MOS VGA

Inventor:

Arya R. Behzad

Our Ref:

1875.138000G

Sir:

Transmitted herewith for appropriate action are the following documents:

- 1. Information Disclosure Statement;
- 2. Form PTO-1449 (4 pages) citing 56 documents; and
- 3. One (1) return postcard.

It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Jeffrey T. Helvey Attorney for Applicant

Registration No. 44,757

JTH/LMY:krd **Enclosures** 

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Sterne, Kessler, Goldstein & Fox P.L.C.: 1100 New York Avenue, NW: Washington, DC 20005: 202.371.2600 f 202.371.2540: www.skgf.com



In re application of:

Confirmation No.:

7963

Arya R. Behzad

Art Unit:

2832

Appl. No.:

10/809,838

Examiner:

To Be Assigned

Filed:

March 26, 2004

Atty. Docket:

1875.138000G

For:

Large Gain Range, High Linearity,

Low Noise MOS VGA

## **Information Disclosure Statement**

Commissioner for Patents PO Box 1450 Alexandria, VA 22313-1450 Mail Stop Amendment

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98.

Applicant has listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicant reserves the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application

does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

This Information Disclosure Statement is being filed under 37 C.F.R. § 1.97(b) before the mailing date of a first Office Action on the merits. No statement or fee is required.

Copies of documents AA1-AR1, AA2-AQ2, AA3-AM3, AA4-AD4, and AJ4 were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in parent Application No. 10/183,552, filed June 28, 2002 (now U.S. Pat. No. 6,759,904 B2), which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

No copies of U.S. patents and patent application publications cited on the attached Form PTO-1449 are submitted in accordance with 1276 OG 55 because this application was filed after June 30, 2003.

It is expected that the Examiner will review the prosecution and cited art in the parent Application Nos. 10/183,552; 09/547,968; 09/493,942; 09/483,551; and 09/439,101 in accordance with MPEP 2001.06(b), and indicate in the next communication from the Office that the art cited in the earlier prosecution history has been reviewed in connection with the present application.

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Jeffrey T. Helvey Attorney for Applicant Registration No. 44,757

Date:

8/31/04

1100 New York Avenue, N.W. Washington, D.C. 20005-3934 (202) 371-2600

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FORM PTO-1449 054

**EXAMINER** 

ATTY. DOCKET NO. 1875.138000G

APPLICATION NO. 10/809,838

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INVENTOR

INFORMATION DISCLOSURE STATEMENT							Arya R. Behzad FILING DATE ART UNIT						
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EXAMINER						AIE	T		-				
INITIAL				CUMENT NUMBER	DATE		1	NAME		CLASS	SUB-CLASS	FILING DATE	
	AA1		3,931,583		01/1976		+	Gilbert					
	AB1		4,147,971		04/1979		Pr	Price					
	AC1		4,211,975		07/1980		Κι	Kuroda					
	AD1		4,545,076		10/1985		Bi	Biard et al.					
	AE1		4,789,976		12/1988 F		Fu	Fujishima					
	AF1		4,795,923		01/1989	01/1989 Do		Dobos					
	AG1		4,818,903		04/1989	04/1989 Ka		Kawano					
	AH1		4,903,329		02/1990	02/1990 Ma		arik et al.				,	
	Al1		5,006,727		04/199	1	Ra	Ragosch et al.					
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	AJ1		3723778 A1		01/1988			DE				Yes No	
	AK1		19506324 C1		10/1995			DE				Yes No	
	AL1		0 365 085		04/1990			EP				Yes No	
	AM1		0 393 717 A2		10/1990			EP				Yes No	
				OTHER (Includ	ing Aut	hor,	Titl	e, Date, Pertinent P	Pages, e	tc.)			
AN 1 Gilbert, B., "A Low-Noise Wideband Varial IEEE International Solid-State Circuits Corand p. 330.													
	AO 1 Leung, L., Buchwald, A., "10-MHz 60-dB Dynamic-Range 6-dB Variable Gain Amplifier," IEEE, 1997 pp. 173-176.  Poole, S., Surace, G., Singh, B., Dyer, N., "A CMOS Subscriber Line Audio Processing Circuit Inclu Adaptive Balance," IEEE International Symposium on Circuits and Systems, Finland, Espoo, Volum of 3, June 7-9, 1988, pp. 1931-1934.  AQ 1 Mensink, et al., "A CMOS "Soft-Switched" Transconductor and Its Application in Gain Control and Filters," IEEE Journal of Solid-State Circuits, July 1997, Vol. 32, No. 7, pp. 989, 998.								IEEE, 1997,				
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Burghartz et al., "High-Q Inductors in Standard Silicon Interconnect Technology an Integrated RF Power Amplifier," IBM T.J. Watson Research Center, Yorktov 1995, 3 pages.							ology and its A ktown Heights	application to s, New Jersey,					

**EXAMINER**: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

DATE CONSIDERED



**FORM PTO-1449** 

## INFORMATION DISCLOSURE STATEMENT

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ATTY. DOCKET NO.

1875.138000G

INVENTOR

Arya R. Behzad

FILING DATE

Page 2 of 4

APPLICATION NO.

10/809,838

ART UNIT

March 26, 2004 2832 **U.S. PATENT DOCUMENTS EXAMINER** CLASS SUB-CLASS FILING DATE DOCUMENT NUMBER NAME INITIAL DATE AA2 5,031,233 07/1991 Ragan AB2 5,077,541 12/1991 Gilbert 5,157,350 10/1992 Rubens AC2 07/1994 Chan et al. AD2 5,329,143 AE2 5,428,829 06/1995 Osburn et al. 08/1995 AF2 5,446,311 Ewen et al. 01/1996 5,483,207 Gabara AG2 AH2 5,581,213 12/1996 Linder et al. 12/1996 Mulbrook Al2 5,587,688

**FOREIGN PATENT DOCUMENTS** EXAMINER INITIAL DOCUMENT NUMBER DATE COUNTRY CLASS SUB-CLASS TRANSLATION Yes AJ2 0 431 887 06/1991 EP No Yes 0 535 536 A1 04/1993 AK2 EP No Yes AL2 0 601 560 A1 06/1994 EP No Yes 0 780 853 A1 06/1997 EP AM2 No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)					
	AN	2	Craninckx et al., "A 1.8-Ghz Low-Phase-Noise CMOS VCO Using Optimized Hollow Spiral Inductors," IEEE Journal of Solid-State Circuits, Vol. 32, No. 5, May 1997, pp. 736-744.		
	AO	2	Long et al., "The Modeling Characterization, and Design of Monolithic Inductors for Silicon RF IC's," IEEE Journal of Solid-State Circuits, Vol. 32, No. 3, March 1997, pp. 357-369.		
	AP	2	Yue et al., "On-Chip Spiral Inductors with Patterned Ground Shields for Si-Based RF IC's," IEEE Journal of Solid-State Circuits, Vol. 33, No. 5, May 1998, pp. 743-751.		
	AQ 2 U.S. Patent Application Ser. No. 09/573,356, Khorramabadi, filed Mar. 17, 2000.		U.S. Patent Application Ser. No. 09/573,356, Khorramabadi, filed Mar. 17, 2000.		
	AR	2			

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Page 3 of 4 ATTY, DOCKET NO. APPLICATION NO. 10/809,838 1875.138000G INVENTOR Arya R. Behzad **FILING DATE ART UNIT** 

INFORMATION DISCLOSURE STATEMENT March 26, 2004 2832 **U.S. PATENT DOCUMENTS EXAMINER** CLASS SUB-CLASS FILING DATE DOCUMENT NUMBER DATE NAME INITIAL AA3 5,682,119 10/1997 Soda 02/1998 Patel et al. AB3 5,715,012 5,717,243 02/1998 Lowther AC3 AD3 5,737,035 04/1998 Rotzoll 5,739,587 04/1998 Sato AE3 06/1998 Kardontchik AF3 5,768,700 10/1998 Watt 5,825,600 AG3 AH3 5,828,589 10/1998 Degenhardt 02/1999 Roth et al. AI3 5,874,857 **FOREIGN PATENT DOCUMENTS** EXAMINER COUNTRY SUB-CLASS **TRANSLATION** INITIAL DOCUMENT NUMBER DATE CLASS Yes AJ3 0 809 351 11/1997 EP No Yes 07/1987 JΡ 62154607 AK3 No Yes AL3 97/09786 03/1997 wo No Yes 97/32393 09/1997 WO **АМЗ** No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) AN 3 AO 3 AΡ 3 AQ 3 AR 3 DATE CONSIDERED

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INFORMATION DISCLOSURE STATEMENT

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ATTY. DOCKET NO. APPLICATION NO. 1875.138000G 10/809,838

INVENTOR Arya R. Behzad

FILING DATE ART UNIT

March 26, 2004 2832 **U.S. PATENT DOCUMENTS EXAMINER** DOCUMENT NUMBER NAME CLASS SUB-CLASS | FILING DATE INITIAL DATE AA4 5,955,921 09/1999 lde et al. AB4 6,011,437 01/2000 Sutardja et al. 05/04/1998 AC4 6,072,366 06/2000 Maeda et al. 06/04/1999 12/2000 Shibata et al. AD4 6,163,215 04/22/1999 AE4 6,445,039 B1 09/2002 Woo et al. 01/14/2000 AF4 6,525,609 B1 02/2003 Behzad 04/12/2000 AG4 07/2004 Behzad 06/28/2002 6,759,904 B2 AH4 Al4 FOREIGN PATENT DOCUMENTS **EXAMINER** INITIAL DOCUMENT NUMBER DATE COUNTRY CLASS SUB-CLASS TRANSLATION Yes AJ4 98/50956 11/1998 WO No

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